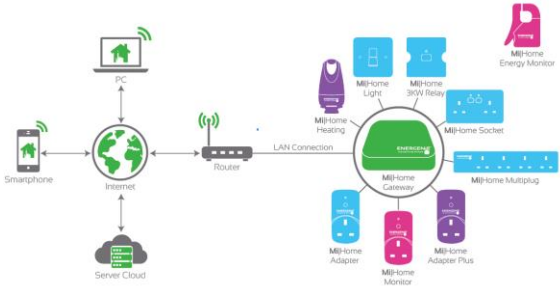
User Manual

Energenie MiHome eTRV

Thank you for buying the MiHome eTRV (Thermostatic Radiator Valve). Please read through this manual before using the product, and follow the instructions in it.

This eTRV can be installed as part of the MiHome smart home network.



This eTRV can only be fitted to a radiator that already has a thermostatic radiator valve, as shown opposite. It has been designed to fit most standard radiators). In this case, the eTRV is easy to fit and there is no plumbing work involved

If you have a manual radiator valve, as shown opposite, you will need to have a normal thermostatic radiator valve fitted first. You may need professional help from a heating engineer or registered plumber.

What is a thermostatic radiator valve (TRV)

TRVs sense the temperature of the air around them and regulate the flow of water through the radiator accordingly. They do not control the boiler.

TRVs should be set at a level that gives you the room temperature you want. These settings may have to be different in each room, and you should set the TRVs to suit each room and then leave them to do their job.

Turning a TRV to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the boiler and the size and type of radiator. Turning a TRV to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

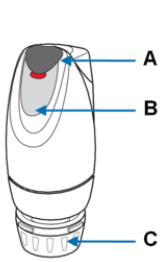
TRVs need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture.

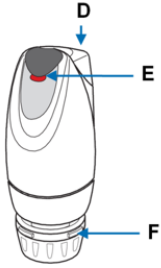
TRVs cannot turn off the boiler when the whole house is warm. To do that, your boiler will need to be controlled by a thermostat in a room. The radiator in the room the boiler thermostat is in should not normally have a TRV. If it does, keep the TRV on the maximum setting and adjust the boiler's thermostat as explained in the instructions for your boiler.

This manual explains how to install, use and maintain the eTRV. Please keep this manual in a safe place so you can refer to it in the future if you need to. If you need this guide in large print, download the instructions from www.mihome4u.co.uk.

Using Your eTRV

Each eTRV controls a radiator valve to regulate the heating in the room, based on timed programmes, set temperatures and how the room is used under control of the MiHome network. Using the eTRV improves your comfort and saves energy.





A: Infrared receiver
B: Grey push button
C: Base ring

D: Battery cover
E: LED indicator
F: Base-ring pegs

G: Stem

The MiHOME eTRV is controlled remotely via radio control with a range of 25 metres approximately in open air.

Safety Instructions

If you do not use the eTRV correctly, in line with these operating instructions:

- the warranty will become invalidated; and
- we will not be liable for any damage or loss whatsoever, including indirect loss, damage to property or personal injury.

The eTRV, remote control and accessories are not intended for children and must not be used as toys.

Do not leave packaging material lying around as children might be tempted to play with it, which is extremely dangerous.

You must only use the product in dry areas indoors, and it must be protected from moisture and water.

Handle the product with care. It can be damaged through being hit or dropped, even from a low height.

Do not open the eTRV as it does not contain any parts that you need to service. If the eTRV arrives faulty, return it to where you bought it.

The eTRV is protected under GB Patent, number 2452043.

Disposal

The outer box of the packaging is made from 69% recycled material from managed forests and is 100% recyclable.

Do not throw this device away with your regular household waste. You must take electronic equipment to a local tip to be disposed of in line with current regulations.Never try to recharge standard batteries as they may explode.

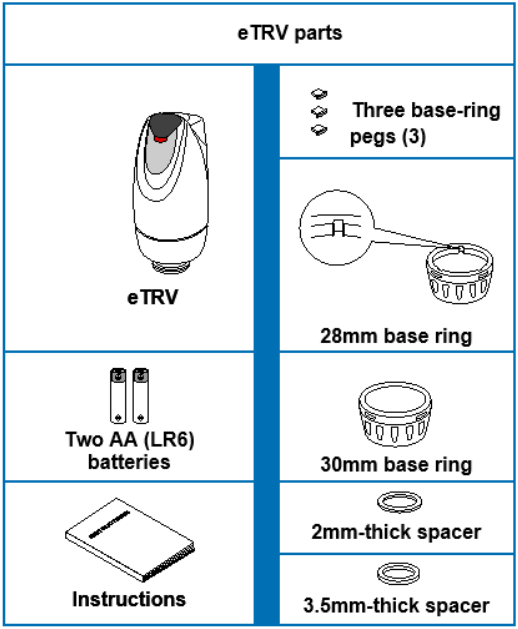
Do not take batteries apart or throw them into a fire.

Do not short circuit batteries.

Do not put used batteries in your regular household rubbish. Take them to your local battery-disposal point.

Contents

The box should contain the following items and accessories.



You will need:

- a Phillips screwdriver

You may need:

- an adjustable spanner (to remove the existing TRV)

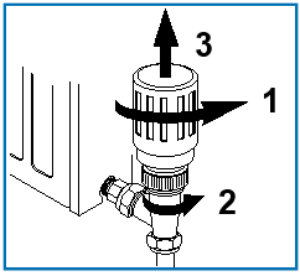
Installation

The first step is to remove your existing TRV head.

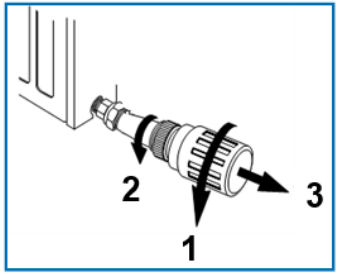
Step 1 - Turn the TRV thermostat anticlockwise as far as it will go.

Step 2 - Release the base by turning it anticlockwise, by hand or with a spanner.

Step 3 - Pull the existing TRV thermostat off the valve.



Removing the existing vertical TRV

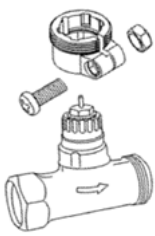
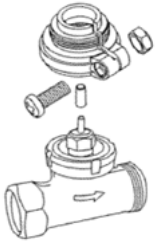
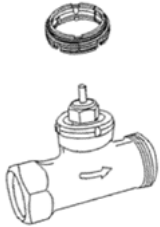


Removing the existing horizontal TRV

The eTRV is compatible with valves made by:

- Barlo
- Braukmann
- Drayton
- Honeywell
- Landis & Gyr DuoGyr
- Myson
- Pegler
- Regis (B&Q)
- Siemens

and many others.

		
Danfoss RA	Danfoss RAV	Danfoss RAVL
If you have an RA or RAV valve, you must fit the adaptor with the nut and bolt that comes with the adaptor. In the case of the RAV adaptor, the extension provided with the adaptor must be attached to the valve tappet		The adaptor must be placed on the valve and tightened.

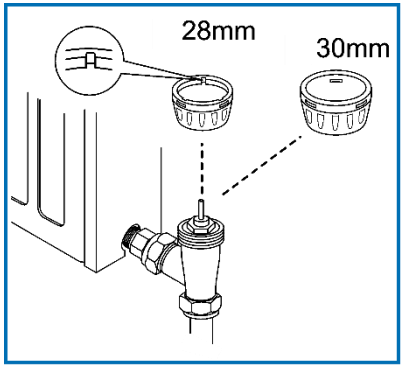
The base-rings and spacers allow your eTRV to fit to either 28mm or 30mm radiator valves, whichever is already on your radiator. The 28mm ring has notches inside it.

It is important that you use the correct size base ring for your valve. To check which one to use, remove the existing TRV as shown earlier.

To identify which base ring to use, take one and screw it onto the radiator valve, before attaching to the eTRV, to see if it fits.

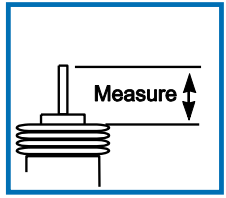
When you have found the correct base-ring, unscrew it so you can attach it to the eTRV.

Important - Test which base ring fits each radiator valve before attaching it to the eTRV.

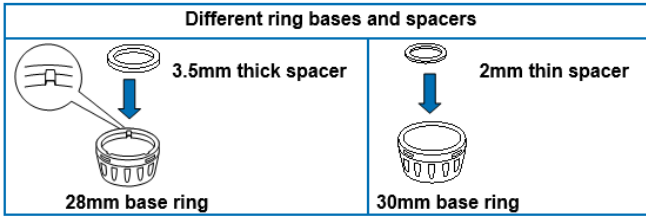


Choosing and Fitting a spacer

In most cases (where the valve pin is taller than 14mm), you will need to fit a spacer inside the base ring. The spacer comes in two thicknesses, 2mm and 3.5mm. It is important that you use the correct size spacer.



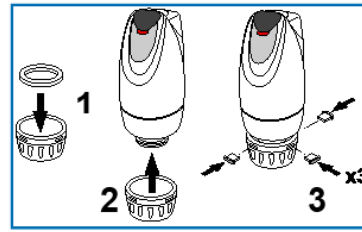
Tip – the 3.5mm-thick spacer is the same thickness as a £1 coin.



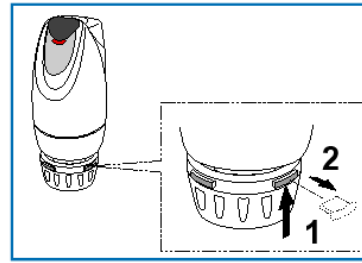
If you need to use a spacer, put it in place in the base ring before you attach the base-ring to the eTRV.

Once the spacer is in place, attach the base-ring to the eTRV.

Step 1 - Put the correct spacer (if one is needed) in the base ring.
Step 2 - Fit the base ring onto the eTRV.



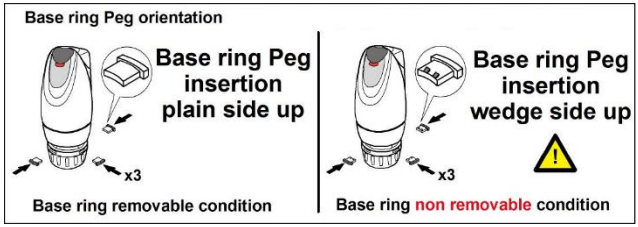
Step 3 - Firmly push the three base-ring pegs into the slots on the base ring.



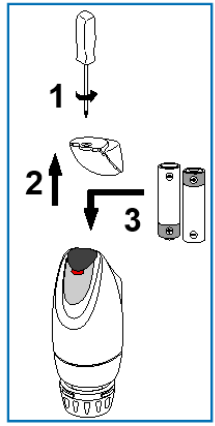
If you ever need to remove the base ring from the eTRV, follow the steps below.

Step 1 - Insert a 5mm, thin flat-head screwdriver under the peg.

Step 2 - Prise out pegs from base-ring. Take care not to lose any of the pegs.


Base ring Peg orientation
Base ring Peg insertion plain side up
x3
Base ring removable condition
Base ring Peg insertion wedge side up
x3
Base ring non removable condition

Inserting the Batteries



Step 1 - Using a Phillips screwdriver (one with a cross tip), unscrew the screw at the top of the battery-compartment, but do not remove the screw.

Step 2 - Remove the battery-compartment cov**er**, with the screw still in it.

Step 3 - Insert the two AA (LR6) batteries that came with the eTRV into the battery compartment as shown. Make sure you put the batteries in the right way. Inside the battery cover there

is a diagram showing which way to fit the batteries when looking from the front of the eTRV.

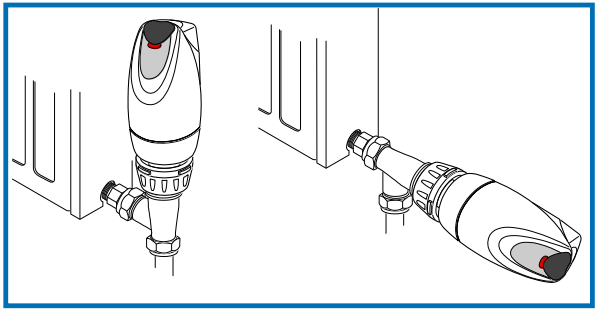
Step 4 - Put the battery-compartment cover back on. Hold it in place while you fully tighten the screw.

The motor will automatically start to retract the stem (pull it in) after 5 seconds.

Important - The batteries provided with the eTRV will last for up to 1½ years, depending on how often the motor runs. When you need to replace the batteries, insert new high-quality AA alkaline batteries. Do not use rechargeable batteries.

Fitting to the Radiator

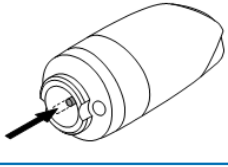
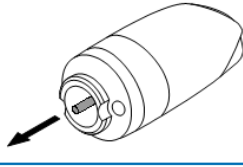
You can fit the eTRV vertically or horizontally (see the diagram), depending on the way the existing radiator valve is pointing.



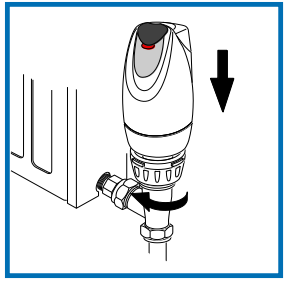
Attaching the eTRV

Before you attach the eTRV, it is important that the stem is fully retracted (in), not extended (out). If you have just fitted the

batteries, then the stem will have automatically retracted as shown below.

	
Retracted stem (in) (opens radiator valve)	**Extended stem (out) (closes radiator valve)**

If the stem is extended (see above), take the batteries out and then put them back in again. The motor will automatically come on and start retracting the stem after 5 seconds.



Once the stem has fully retracted, you can safely attach the eTRV to the radiator valve. Remember to have it facing forwards, with the LED indicator pointing forwards.

Step 1 - Place the eTRV on the valve.

Step 2 - Carefully screw the base ring clockwise by hand until it is firmly in place.

Please try and ensure the TRV is not blocked by furniture, curtains and so on to limit localised heating effects and ensure optimum communications to the Gateway controlling device.

Installing on the MiHOME Network

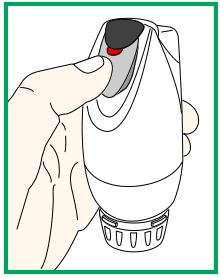
The eTRV operates as part of the MiHome smart home automation system. This will allow remote control from a smart device such as a smartphone or tablet or from any browser connected directly to the MiHome server.

Pair with your Mihome Gateway [1]

Once installed the device must be paired with your MiHome Gateway device which you should have already successfully installed.

You will need to select the eTRV device to be paired in your smart device App or in the internet browser. Follow the instructions to install the eTRV. This will involve pressing and holding the grey button on the top of the unit for 4 seconds to place it into its pairing mode.

Button Operation



You can use the grey push button on the front of your eTRV to

• **Pair your device with the MiHome Gateway**.

Pressing the grey push button and holding it in for four seconds The LED will go green then flash red indicating that pairing has started.

• **Boost to comfort temperature setting for an hour**.

[1] *Note it is possible to pair the unit with the MiHOME network before it is installed to the radiator*.

Pressing the grey push button and holding it in for two seconds boosts the eTRV to the comfort temperature setting for one hour.

Summary:

1. During normal operation press and hold for 2 seconds for 1 hour boost

2. During 1 hour boost press and hold for 2 seconds to restart 1 hour boost

3. During normal operation press and hold for 4 seconds to initiate pairing to the Gateway

4. During 1 hour boost press and hold for 4 seconds to cancel 1 hour boost and initiate pairing

What the LED Light indicator means

The LED indicator flashes red, yellow or green to tell you what the eTRV is doing and it's setting.

	Lights	Meaning
1	Red light flashes once every five seconds	Dead battery needs replacing – valve set fully open
2	Red light flashes twice every five seconds	Low battery needs replacing
3	3 long red flashes	Valve fully closed
4	3 long green flashes	Valve fully open
5	… Red light flashes continuously	Valve motor is running
6	Green LED on when button held for two seconds but less than 5 seconds	Button held down for two seconds selects one hour boost
7	Red light flashes once per second for five seconds	Button held down for 5 seconds puts the eTRV into pairing mode, boost is cancelled

Frost Protection

In the OFF setting, the heating in the room will not come on until the temperature drops to below 10°C. This is to prevent the water pipes and radiator from freezing. The one-hour boost will still work so you can boost the heating for one hour, after which time it will return to the OFF setting.

Remote Control

From your MiHome App or from a Browser connected to the MiHome server (www.mihome.co.uk) you have the following controls for the eTRV.

- Set the Temperature - 4°to 30°C
- Exercise the valve – maintenance use
- Check the battery voltage level (nominally 3.1V)
- Set the valve to fully open or closed
- Control using timers to allow zoning for instance

Exercising the valve

Some radiator valves can stick after a long period without moving. To reduce the risk of this happening (for example, in the summer when the heating is off), the valve will exercise once a week. This will happen on Sunday night at midnight. The eTRV will automatically extend and retract to exercise all parts.

Low battery

When the batteries are low, the red LED light will flash twice every five seconds. At this point you should replace the batteries. To change the batteries, see earlier instruction.

Dead battery

When the battery does not have enough charge to power the eTRV motor, the red LED light will flash once every five seconds. At this point, the eTRV's stem will automatically retract so heating will not be controlled.

Technical information

Radio remote control	FSK, 434.3MHz
Radio range	Approx. 25m in open air
Protocol	OpenThings
Temperature range	10°C to 24°C
Frost-protection temperature	10°C
Temperature range for storage	-20°C to +60°C
Temperature range working	+5°C to +40°C
Maximum circulation temp.	90°C
Application group	Central Generation
Zone type	Maintained or Intermittent
Battery power	Two 1.5V AA alkaline LR6
Battery life in use	Up to 1½ years
Size without base-ring (HxWxD)	103 x 45 x 45 mm
Size with base-ring (HxWxD)	120 x 45 x 45 mm
Protection class	IP20

This device meets the regulatory requirements for CE marking.

It complies with the R&TTE Directive.